CENTERS FOR DISEASE CONTROL

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Allegheny County 1986-87 Influenza Vaccination Program — Pittsburgh, Pennsylvania

Over the last 10 years, the Allegheny County Health Department has promoted vaccination of all persons considered to be at high risk of complications and death following influenza infection (*1*). Vaccine coverage for institutionalized high-risk individuals has ranged from a low of 36% for the 1979-80 influenza season to 71% for the 1985-86 season. Until the 1986-87 season, coverage among noninstitutionalized individuals had not been determined.

For the 1986-87 season, the health department set a goal of 60% coverage for all high-risk groups. These groups include the 10,200 persons served by chronic-care facilities and the 210,000 persons who are over 65 years of age but do not require long-term care. The number of high-risk persons below 65 years of age in Allegheny County's general population of 1.4 million is unknown. To accomplish its goal, the health department offered free vaccine and technical support to all physicians, chronic-care facilities, and other medical providers who were willing to administer the vaccine free of charge.

All potential providers of influenza vaccine were sent copies of the recommendations of the Immunization Practices Advisory Committee (ACIP) on prevention and control of influenza (*1*). Participants received vaccine requisition forms and a supply of information statements on influenza and influenza vaccine, which describe the benefits and risks of influenza vaccination. These information statements are signed by vaccinees or their guardians to acknowledge their having understood the information and their consent to receive vaccine. The statements also provide a telephone number so vaccinees can report any significant illnesses that develop within 28 days after vaccination. These steps help in monitoring adverse events that occur during the influenza season. All providers, community groups, and clinics using influenza vaccine supplied by the health department were required to report on a regular basis the number of doses administered by their organization.

Influenza — Continued

In July 1986, the health department sent promotional and educational materials to all physicians, hospitals, community health centers, senior citizen facilities, and other organizations dealing with high-risk and older persons. Local media were informed and encouraged to publicize the times and locations of the special health department and community clinics. Program staff kept the operating hours and locations of these clinics current so interested persons could be referred to a convenient clinic. The American Lung Association (ALA) of western Pennsylvania contributed significantly to the campaign by strongly recommending the vaccine to the individuals it serves who belong to high-risk groups and by distributing educational materials and information to professional organizations.

Well before the beginning of the 1986-87 influenza season, health department staff mailed letters to all nursing home directors and chronic-care facility administrators, recommending influenza vaccine for all residents. Consent was handled in several ways: competent patients signed the forms themselves, and legal guardians or their designees signed for patients unable to do so. Influenza vaccine provided to nursing homes was intended for residents only, and individual facilities were responsible for providing vaccine to their staff.

A limited number of doses of pneumococcal polysaccharide vaccine was also available. Because of cost constraints, pneumococcal vaccine was not sent to other providers but was administered free to high-risk patients attending health department clinics.

The vaccination program was evaluated at the end of the 1986-87 influenza season. Data revealed that 52,455 (92%) of the 57,140 doses of influenza vaccine available for distribution were administered. Thirty-four percent were given in health department clinics, and 43% were given in hospital outpatient departments, community clinics, and senior citizen facilities. The remainder were administered in chronic-care facilities (16%) and by private providers (7%). A total of 4,624 doses of pneumococcal vaccine were administered in health department clinics.

Of the 10,200 persons residing in nursing homes and chronic-care facilities, 8,529 (84%) received vaccine provided by the health department. Health department staff and the ALA conducted a special survey to evaluate vaccine coverage among persons 65 years of age and above who were not residing in chronic-care facilities. Thirty-two percent of the 533 persons aged 65 and over identified in a random sample of 400 households reported obtaining influenza vaccine during the 1986-87 influenza season. Fifty-seven percent of those vaccinated identified private physicians as their source of medical care and vaccine administration.

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Editorial Note: The 10-year effort to provide a high rate of influenza vaccine coverage to high-risk groups in Allegheny County illustrates several important points:

- While influenza vaccination programs should begin in November, promotional efforts should be initiated well before the influenza season. Motivational and programmatic materials should be mailed early in the summer to allow ample time for coordination. To anticipate resource needs, public health agencies should estimate the size of the target population well in advance.

Influenza — Continued

- Program organizers should collaborate with volunteer organizations whose strong endorsements can influence both medical professionals and the public. This measure is especially important for reaching chronically ill persons under age 65, a large percentage of whom may be accessible only through private providers.
- After the campaign, the effectiveness of resource usage and vaccine coverage among specific risk groups should be evaluated.

Influenza vaccination is the single most important measure in preventing influenza infection. Consequently, the ACIP recommends influenza vaccine for all high-risk persons 6 months of age or older and for their medical-care providers or household contacts, for children and teenagers receiving long-term aspirin therapy, and for other persons wishing to reduce their chances of acquiring influenza (*1*). The ACIP recommends that infection-control programs in chronic-care facilities set a goal of 80% vaccination rates for the residents.

In Allegheny County, the flexibility in providing consent for vaccination of residents of chronic-care facilities probably helped to exceed the 80% goal recommended by the ACIP. However, a household survey revealed that the vaccine coverage rate achieved outside chronic-care facilities was much lower than desired. This problem should be addressed by developing systematic approaches to influenza vaccination in physician's offices, clinics, and hospitals. These approaches should include vaccination not only for high-risk patients but also for medical personnel who have the potential to introduce influenza virus into high-risk hospital settings.

November is the optimal time for organized vaccination campaigns in chronic-care facilities, worksites, and other places where high-risk persons are routinely accessible. In addition, high-risk adults and children who do not reside in chronic-care facilities should be vaccinated during regular medical follow-ups in the fall, and those not scheduled for visits should be notified to come in for vaccination. When hospitalized high-risk adults and children are discharged between September and the time influenza activity declines in their community, physicians should provide vaccine at the time of discharge (*1*).

Since there is considerable overlap between the groups targeted to receive influenza vaccine and pneumococcal polysaccharide vaccine, public health authorities should consider offering both vaccines during an influenza campaign. Pneumococcal vaccine and influenza vaccine can be given at the same time at different sites without increased risk of side effects (*1*).

Because of cost considerations, Allegheny County was forced to restrict pneumococcal vaccination to high-risk patients attending health department clinics. However, since a single dose of pneumococcal vaccine confers lasting immunity for adults (*2*), even modest programs such as this should produce high vaccine coverage levels over time. Whenever resources permit, a candidate for influenza vaccine should be viewed as a candidate for pneumococcal vaccine, unless previously vaccinated (*1*). The cost of pneumococcal vaccine is reimbursable for eligible beneficiaries through Medicare, Part B.

References

1. Immunization Practices Advisory Committee. Prevention and control of influenza. MMWR 1987;36:373-80,385-7.
2. Immunization Practices Advisory Committee. Update: pneumococcal polysaccharide vaccine usage—United States. MMWR 1984;33:273-6, 281.

Perspectives in Disease Prevention and Health Promotion

Progress Toward Achieving the 1990 Objectives in Occupational Safety and Health

In 1980, the Public Health Service published *Promoting Health/Preventing Disease: Objectives for the Nation* (*1*), which identified public health objectives in 15 areas and targeted them for accomplishment by or before the year 1990. Occupational safety and health was one of these 15 areas, and the National Institute for Occupational Safety and Health (NIOSH), CDC, was given the responsibility of monitoring efforts to accomplish these objectives. On February 4, 1987, a panel of experts from the U.S. Department of Health and Human Services and the U.S. Department of Labor met to report on progress toward these goals.

In all, 20 objectives had been identified in occupational safety and health (see page 627). The panel grouped them under the broad, general categories of improving health status, reducing risk factors, increasing public and professional awareness, and improving services and protection as well as surveillance and evaluation. The major obstacle to measuring progress in occupational safety and health has been the lack of comprehensive and reliable methods for surveillance of work-related diseases and injuries. Currently available surveillance systems were designed for different purposes, and none of them adequately covers occupational safety and health. As a result, many gaps exist in the information received, and a regular comparison of disease trends, which would be essential for tracking the objectives, has not been possible.

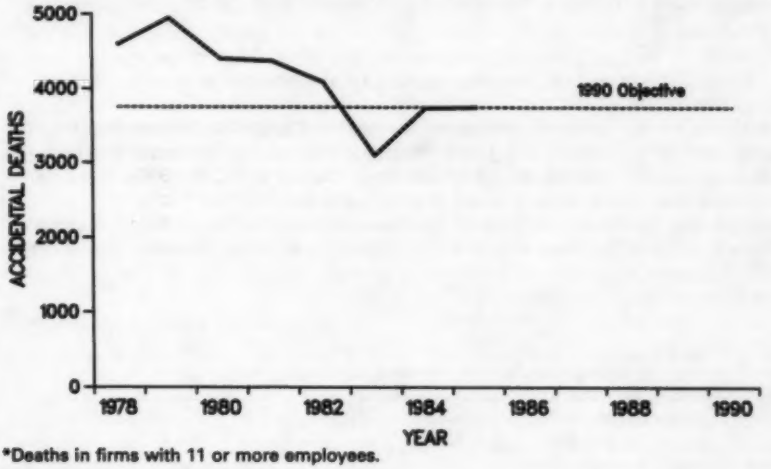
Despite these limitations, there is enough information to indicate progress. Some reasonable tracking systems are now available for evaluating progress toward 16 of the 20 objectives. Four of these relate directly to improved health status or to a reduction in the incidence of disease or injury. For the latter, available data indicate reductions in two categories of work-related injuries: accidental deaths occurring in the workplace (Figure 1) and work-related disabling injuries (Figure 2).

Although documenting the precise status of the remaining objectives would be extremely difficult and costly, each participating agency described activities that indicate progress in the general categories defined by the panel. The ten strategies proposed by NIOSH for preventing the leading work-related diseases and injuries have been a major contribution. These strategies, which were developed over the past 2 years, were based on a list of ten leading work-related diseases and injuries that NIOSH first published in 1983 (*2*). A group of multidisciplinary experts reviewed the strategies at national symposia in 1985 and 1986, and the first five have been published (*3*). The second five are being prepared for publication.

NIOSH has now developed a program to implement these strategies and to encourage active participation by all relevant constituencies. All ten strategies call for epidemiologic surveillance of the target condition, and nine of the ten also call for environmental surveillance of the causative agents. The Sentinel Event Notification System for Occupational Risks (SENSOR) is being developed to assure the reporting of all significant occupational health problems. By 1986, NIOSH had acquired death certificates for all occupationally related deaths occurring during the period 1980-1984 and had begun preliminary analysis to provide occupation- and job-specific

1990 Objectives — Continued

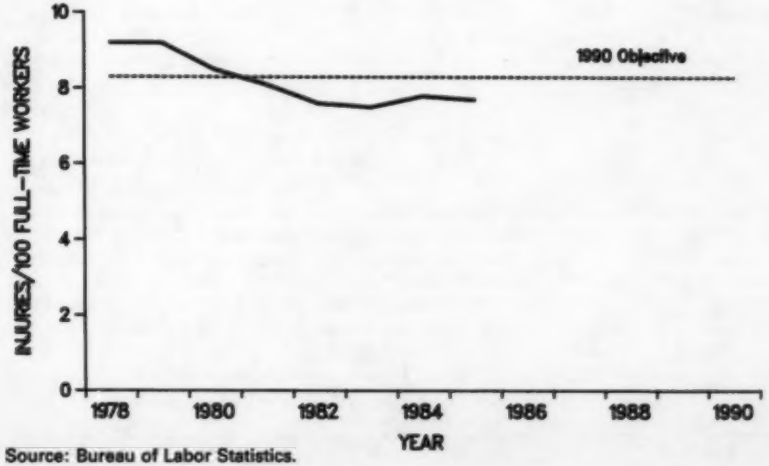
FIGURE 1. Accidental deaths in the workplace,* by year — United States, 1978-1985



*Deaths in firms with 11 or more employees.

Source: Bureau of Labor Statistics.

FIGURE 2. Incidence rate of work-related disabling injuries, by year — United States, 1978-1985



Source: Bureau of Labor Statistics.

1990 Objectives — Continued

data. NIOSH, the Bureau of Labor Statistics, and the National Center for Health Statistics signed a memorandum of understanding early in 1987 to assure broader and more consistent cooperation in the surveillance of occupational safety and health problems

Although the proposed prevention strategies embody concepts found in the 1990 Objectives for the Nation, they also include diseases and conditions not addressed in the objectives and add process objectives specifically aimed at implementing the strategies. Thus, implementing the strategies will mean not only meeting the objectives but also taking an additional step toward preventing the ten leading work-related diseases and injuries in the United States.

Reported by: Office of Disease Prevention and Health Promotion, Public Health Svcs, DHHS. Office of Program Planning and Evaluation, National Institute for Occupational Safety and Health, CDC.

(Continued on page 627)

TABLE I. Summary — cases specified notifiable diseases, United States

Disease	37th Week Ending			Cumulative, 37th Week Ending		
	Sept. 19, 1987	Sept. 13, 1986	Median 1982-1986	Sept. 19, 1987	Sept. 13, 1986	Median 1982-1986
Acquired Immunodeficiency Syndrome (AIDS)	301	274	N	13,115	8,785	N
Aseptic meningitis	446	413	413	7,692	6,618	6,020
Encephalitis: Primary (arthropod-borne & unspec)	39	39	47	676	787	815
Post-infectious	1	3	2	82	83	83
Gonorrhea: Civilian	13,048	16,441	17,807	550,332	617,972	622,293
Military	201	281	531	11,757	11,704	15,244
Hepatitis: Type A	444	430	430	17,286	15,575	15,477
Type B	425	385	430	18,174	18,319	17,963
Non A, Non B	38	43	N	2,150	2,553	N
Unspecified	94	72	101	2,255	3,195	4,015
Legionellosis	13	37	N	612	512	N
Leprosy	8	4	4	143	189	177
Malaria	19	17	21	630	757	732
Measles: Total*	52	66	9	3,313	5,419	2,315
Indigenous	46	52	N	2,913	5,133	N
Imported	6	13	N	400	280	N
Meningococcal infections: Total	20	29	29	2,140	1,867	2,045
Civilian	20	29	29	2,139	1,865	2,030
Military	-	-	-	1	2	6
Mumps	82	37	36	10,253	3,514	2,443
Pertussis	46	93	86	1,741	2,239	1,668
Rubella (German measles)	11	5	5	300	431	552
Syphilis (Primary & Secondary): Civilian	614	545	545	24,819	18,380	19,619
Military	1	1	4	106	123	231
Toxic Shock syndrome	7	3	N	231	253	N
Tuberculosis	416	426	468	14,849	15,334	15,334
Tularemia	3	5	5	144	106	177
Typhoid Fever	12	9	11	221	213	253
Typhus fever, tick-borne (RMSF)	30	23	27	512	579	681
Rabies, animal	89	107	119	3,384	4,007	4,007

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1987		Cum. 1987
Anthrax	1	Leptospirosis	16
Botulism: Foodborne	9	Plague	7
Infant	40	Poliomyelitis, Paralytic	-
Other	-	Psittacosis	63
Brucellosis (Mo. 1)	81	Rabies, human	-
Cholera	4	Tetanus (Hawaii 1)	30
Congenital rubella syndrome	5	Trichinosis	31
Congenital syphilis, ages < 1 year	-	Typhus fever, flea-borne (endemic, murine)	23
Diphtheria	1		

*Five of the 52 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending September 19, 1987 and September 13, 1986 (37th Week)

Reporting Area	AIDS	Aseptic Menin-gitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionel-losis	Leprosy
			Primary	Post-in-fectious			A	B	NA,NB	Unspeci-fied		
	Cum. 1987	1987	Cum. 1987	Cum. 1987	Cum. 1987	Cum. 1986	1987	1987	1987	1987	1987	Cum. 1987
UNITED STATES	13,115	445	876	82	550,332	617,972	444	425	38	94	13	143
NEW ENGLAND	528	22	34	2	16,824	15,077	5	31	-	2	2	12
Maine	16	3	2	-	501	640	-	2	-	-	-	-
N.H.	13	2	2	-	288	398	-	-	-	-	-	2
Vt.	6	6	5	-	150	184	-	1	-	-	1	-
Mass.	330	6	15	1	6,111	6,320	4	15	-	2	1	9
R.I.	46	3	3	1	1,505	1,203	1	3	-	-	-	-
Conn.	117	2	7	-	8,269	6,332	-	10	-	-	-	1
MID. ATLANTIC	3,885	103	107	7	87,106	102,673	25	48	4	8	3	11
Upstate N.Y.	473	39	42	3	11,838	12,309	10	10	1	-	3	-
N.Y. City	2,364	10	7	-	45,379	56,673	7	19	-	8	-	11
N.J.	667	16	7	-	11,480	13,691	4	9	-	-	-	-
Pa.	381	38	51	4	18,409	18,000	5	10	3	-	-	-
E.N. CENTRAL	879	98	262	12	82,440	85,366	15	23	3	-	2	7
Ohio	176	70	114	5	18,275	20,168	7	9	-	-	2	2
Ind.	79	-	37	-	6,390	8,971	-	-	-	-	-	-
Ill.	410	-	25	7	25,348	21,796	1	1	2	-	-	1
Mich.	148	28	60	-	25,667	25,556	7	13	1	-	-	3
Wis.	66	-	26	-	6,760	8,875	-	-	-	-	-	1
W.N. CENTRAL	279	10	48	-	22,510	26,619	26	10	2	-	1	-
Minn.	75	1	28	-	3,482	3,809	-	-	-	-	-	-
Iowa	19	2	8	-	2,145	2,711	-	-	-	-	-	-
Mo.	135	5	-	-	11,830	13,365	14	5	1	-	-	-
N. Dak.	1	-	-	-	197	238	-	-	-	-	-	-
S. Dak.	2	1	-	-	417	557	-	-	-	-	-	-
Nebr.	16	1	10	-	1,412	2,076	-	4	-	-	1	-
Kans.	31	-	2	-	3,057	3,863	12	1	1	-	-	-
S. ATLANTIC	2,127	103	115	27	144,183	160,612	44	120	9	29	3	5
Del.	15	-	4	1	2,397	2,614	-	1	-	-	-	-
Md.	243	22	16	5	16,292	18,799	5	19	-	3	-	2
D.C.	251	1	-	-	9,552	11,947	1	2	-	-	-	-
Va.	155	14	27	2	10,576	13,034	4	18	2	23	-	-
W. Va.	16	2	34	-	1,068	1,611	2	1	-	-	-	-
N.C.	117	25	19	-	20,973	24,962	4	13	1	1	-	-
S.C.	53	3	-	-	11,855	13,916	1	13	1	-	-	1
Ga.	312	3	1	-	25,770	27,037	6	18	-	-	1	-
Fla.	966	33	14	19	45,700	46,673	21	35	5	2	2	2
E.S. CENTRAL	156	25	48	7	41,556	49,980	12	33	2	1	1	-
Ky.	25	17	22	1	4,218	5,465	7	4	-	1	-	-
Tenn.	25	1	10	-	14,528	19,345	2	10	1	-	-	-
Ala.	86	7	16	1	13,221	14,271	3	19	1	-	1	-
Miss.	20	-	-	5	9,589	10,879	-	-	-	-	-	-
W.S. CENTRAL	1,224	39	105	4	62,456	72,996	54	53	6	20	-	4
Ark.	26	1	-	2	7,131	6,856	-	1	-	-	-	-
La.	164	3	20	-	11,075	13,058	8	11	1	3	-	-
Okla.	73	-	18	1	6,928	8,301	7	7	-	-	-	-
Tex.	961	35	67	1	37,322	44,780	39	34	5	17	-	4
MOUNTAIN	339	17	34	4	14,389	18,258	73	38	5	12	-	2
Mont.	2	7	1	-	403	505	2	1	-	1	-	-
Idaho	4	-	-	-	524	594	13	1	-	-	-	1
Wyo.	3	-	1	-	317	406	-	2	-	-	-	-
Colo.	147	2	10	-	3,031	4,768	7	7	-	4	-	-
N. Mex.	27	2	4	-	1,594	1,812	10	10	-	2	-	-
Ariz.	100	5	14	1	4,960	5,968	31	11	3	3	-	-
Utah	20	-	-	3	453	788	8	1	2	2	-	-
Nev.	36	1	4	-	3,117	3,427	2	5	-	-	-	1
PACIFIC	3,698	28	123	19	78,858	86,412	189	69	7	22	1	102
Wash.	160	-	10	4	6,003	6,654	31	6	-	1	-	4
Oreg.	100	-	-	-	2,917	3,610	-	-	-	-	-	-
Calif.	3,364	24	108	15	68,077	73,242	150	63	7	21	1	78
Alaska	12	2	2	-	1,253	1,961	8	-	-	-	-	1
Hawaii	62	2	3	-	608	945	-	-	-	-	-	19
Guam	-	-	-	-	151	135	-	-	-	-	-	-
P.R.	84	-	1	1	1,469	1,892	-	1	-	-	-	5
V.I.	-	-	-	-	194	201	-	-	-	-	-	-
Pac. Trust Terr.	-	-	-	-	287	334	-	-	-	-	-	44
Amer. Samoa	-	-	-	-	59	31	-	-	-	-	-	-

N: Not notifiable U: Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending September 19, 1987 and September 13, 1986 (37th Week)

Reporting Area	Malaria	Measles (Rubeola)					Meningococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1987	1987	Cum. 1987	1987	Cum. 1987	Cum. 1986	Cum. 1987	1987	Cum. 1987	1987	Cum. 1987	Cum. 1986	1987	Cum. 1987	Cum. 1986
UNITED STATES	630	46	2,913	6	400	5,419	2,140	52	10253	46	1,741	2,239	11	300	431
NEW ENGLAND	40	9	114	6	156	96	183	5	41	6	115	122	-	1	9
Maine	-	-	3	-	-	13	10	-	-	-	26	2	-	1	-
N.H.	2	9	61	1§	102	42	17	-	9	-	27	61	-	-	1
Vt.	-	-	11	-	15	-	14	-	3	-	4	3	-	-	1
Mass.	15	-	22	5†	32	35	90	5	13	6	43	28	-	-	4
R.I.	7	-	1	-	1	2	14	-	2	-	1	5	-	-	2
Conn.	16	-	16	-	6	3	38	-	14	-	14	23	-	-	1
MID. ATLANTIC	73	1	620	-	57	1,690	264	6	194	3	206	151	-	11	31
Upstate N.Y.	27	-	26	-	14	98	90	-	84	1	120	98	-	9	23
N.Y. City	6	1	441	-	19	663	20	-	10	-	4	3	-	1	5
N.J.	18	-	32	-	7	905	49	5	47	1	11	14	-	1	3
Pa.	23	-	21	-	17	24	105	1	43	1	71	36	-	-	-
E.N. CENTRAL	42	4	282	-	24	1,041	316	6	5,985	-	183	301	-	34	69
Ohio	12	-	1	-	4	10	105	-	84	-	55	117	-	-	1
Ind.	4	-	-	-	-	25	34	-	915	-	13	24	-	-	-
Ill.	7	3	125	-	19	957	79	4	2,495	-	14	36	-	25	59
Mich.	15	-	29	-	-	58	81	2	879	-	41	27	-	9	8
Wis.	4	1	127	-	2	286	19	-	1,603	-	60	97	-	-	1
W.N. CENTRAL	19	-	208	-	22	339	92	16	1,339	1	96	226	-	1	11
Minn.	7	-	19	-	20	49	27	15	774	-	13	43	-	-	-
Iowa	4	-	-	-	-	134	3	1	398	1	32	18	-	1	1
Mo.	4	-	188	-	1	31	26	-	22	-	24	18	-	-	1
N. Dak.	-	-	1	-	-	25	1	-	6	-	9	5	-	-	1
S. Dak.	-	-	-	-	-	-	2	-	89	-	3	14	-	-	-
Nebr.	3	-	-	-	-	1	5	-	3	-	1	7	-	-	-
Kans.	1	-	-	-	1	99	28	-	47	-	13	121	-	-	8
S. ATLANTIC	109	-	119	-	12	637	348	2	237	4	258	663	-	14	5
Del.	1	-	32	-	-	1	5	-	-	-	5	227	-	2	-
Md.	24	-	3	-	2	35	32	-	23	-	11	159	-	2	-
D.C.	15	-	-	-	1	2	7	-	1	-	-	-	-	-	-
Va.	21	-	1	-	-	60	58	-	69	-	47	33	-	1	-
W. Va.	2	-	-	-	-	2	2	1	32	-	46	23	-	-	-
N.C.	9	-	2	-	3	4	46	-	17	2	105	58	-	1	-
S.C.	4	-	2	-	-	301	34	1	13	-	-	13	-	-	-
Ga.	4	-	-	-	1	83	66	-	40	-	23	111	-	1	-
Fla.	29	-	79	-	5	139	96	-	42	2	21	39	-	7	5
E.S. CENTRAL	12	-	2	-	3	67	105	2	1,226	1	33	45	-	3	4
Ky.	1	-	-	-	-	8	20	-	212	-	1	5	-	2	4
Tenn.	1	-	-	-	-	56	41	1	964	-	9	17	-	1	-
Ala.	5	-	-	-	3	2	36	1	60	1	18	23	-	-	-
Miss.	5	-	2	-	-	3	8	N	N	-	5	-	-	-	-
W.S. CENTRAL	42	-	405	-	4	641	150	5	732	6	222	174	-	11	57
Ark.	1	-	-	-	-	283	19	-	281	-	10	12	-	2	-
La.	-	-	-	-	-	4	17	2	219	2	42	13	-	-	-
Okla.	4	-	2	-	1	39	19	N	N	4	119	95	-	5	-
Tex.	37	-	403	-	3	315	95	3	232	-	51	54	-	4	57
MOUNTAIN	28	-	476	-	19	324	72	4	196	10	148	216	-	24	23
Mont.	-	-	127	-	1	8	4	2	6	-	6	13	-	8	2
Idaho	2	-	-	-	-	1	5	-	5	-	38	33	-	1	-
Wyo.	1	-	-	-	2	-	-	-	-	-	5	4	-	1	1
Colo.	7	-	6	-	4	7	21	-	28	4	53	59	-	-	1
N. Mex.	2	-	312	-	9	37	5	N	N	-	9	20	-	-	-
Ariz.	14	-	30	-	1	258	24	2	145	-	29	50	-	4	2
Utah	1	-	-	-	1	12	9	-	9	6	8	33	-	10	14
Nev.	2	-	2	-	1	1	4	-	3	-	-	4	-	-	3
PACIFIC	265	32	778	-	103	585	610	6	333	15	480	341	11	201	222
Wash.	17	-	34	-	7	156	70	-	45	2	69	102	-	2	14
Oreg.	6	-	2	-	75	9	26	N	N	-	56	10	-	2	1
Calif.	239	32	742	-	17	382	501	6	267	6	167	219	5	126	202
Alaska	3	-	-	-	-	-	4	-	7	-	10	2	-	2	-
Hawaii	1	-	-	-	4	28	9	-	14	7	178	8	6	69	5
Guam	-	-	2	-	-	5	4	-	5	-	-	-	-	1	3
P.R.	1	-	745	-	-	33	5	-	9	-	16	13	-	2	60
V.I.	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-
Pac. Trust Terr.	-	-	1	-	-	-	1	-	5	-	1	-	-	1	2
Amer. Samoa	-	-	-	-	-	2	-	-	3	-	-	-	-	-	1

*For measles only, imported cases includes both out-of-state and international importations.
N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending September 19, 1987 and September 16, 1986 (37th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1987	Cum. 1986	1987	Cum. 1987	Cum. 1986	Cum. 1987	Cum. 1987	Cum. 1987	Cum. 1987
UNITED STATES	24,819	18,360	7	14,849	15,334	144	221	512	3,384
NEW ENGLAND	436	335	-	451	496	1	24	7	6
Maine	1	15	-	22	33	-	1	-	2
N.H.	3	10	-	16	21	-	-	-	-
Vt.	2	8	-	9	14	-	1	-	-
Mass.	202	182	-	251	256	1	12	4	-
R.I.	8	18	-	35	40	-	3	-	1
Conn.	220	102	-	118	132	-	7	3	3
MID. ATLANTIC	4,841	2,631	-	2,553	3,095	-	21	17	292
Upstate N.Y.	159	134	-	367	468	-	8	7	46
N.Y. City	3,405	1,481	-	1,223	1,581	-	1	5	-
N.J.	482	484	-	479	535	-	12	1	13
Pa.	595	532	-	484	511	-	-	4	234
E.N. CENTRAL	852	690	2	1,727	1,831	3	28	48	128
Ohio	77	95	-	324	326	1	7	34	10
Ind.	45	86	-	153	195	-	4	-	14
Ill.	350	351	-	763	792	-	8	6	36
Mich.	130	125	2	411	429	-	4	5	26
Wis.	50	33	-	76	89	2	3	3	42
W.N. CENTRAL	138	157	2	445	457	50	9	49	741
Minn.	14	27	-	91	110	-	4	-	179
Iowa	20	6	-	31	38	4	2	1	212
Mo.	67	82	1	243	229	31	3	18	44
N. Dak.	-	5	-	6	7	1	-	-	89
S. Dak.	10	4	-	22	19	8	-	1	166
Nebr.	7	12	-	18	8	2	-	3	16
Kans.	20	21	1	35	46	4	-	26	35
S. ATLANTIC	8,493	5,853	2	3,212	2,845	5	22	191	825
Del.	58	39	-	31	33	1	-	2	-
Md.	448	307	1	297	230	-	3	42	301
D.C.	251	212	-	107	101	-	1	-	35
Va.	216	263	-	315	243	2	4	17	282
W. Va.	6	18	-	77	88	-	1	6	47
N.C.	478	359	1	351	391	2	2	63	13
S.C.	548	469	-	337	390	-	-	33	43
Ga.	1,190	1,072	-	558	453	-	-	26	152
Fla.	5,298	2,814	-	1,139	1,016	-	11	2	72
E.S. CENTRAL	1,384	1,234	-	1,231	1,382	6	2	80	231
Ky.	13	56	-	296	321	1	1	9	113
Tenn.	544	451	-	302	398	1	1	50	57
Ala.	356	387	-	377	428	1	-	17	61
Miss.	471	330	-	256	215	3	-	4	-
W.S. CENTRAL	3,032	3,895	-	1,738	1,940	53	13	108	486
Ark.	139	174	-	208	281	22	1	11	94
La.	553	624	-	188	320	3	-	-	12
Okla.	105	98	-	185	185	25	3	83	28
Tex.	2,175	2,799	-	1,179	1,174	3	9	12	332
MOUNTAIN	477	422	-	345	367	15	12	12	290
Mont.	8	6	-	10	17	2	-	10	131
Idaho	5	10	-	17	17	1	-	-	6
Wyo.	2	1	-	-	-	-	-	1	62
Colo.	78	103	-	40	42	4	-	-	6
N. Mex.	40	51	-	70	69	1	9	-	2
Ariz.	231	169	-	172	172	3	3	-	63
Utah	21	12	-	16	28	2	-	1	7
Nev.	92	70	-	20	22	2	-	-	13
PACIFIC	5,566	3,653	1	3,147	2,841	11	82	2	305
Wash.	77	114	-	185	134	4	8	-	-
Oreg.	204	77	-	80	97	4	1	-	-
Calif.	5,272	3,437	1	2,897	2,441	2	77	2	302
Alaska	3	-	-	50	37	1	-	-	3
Hawaii	10	25	-	135	132	-	6	-	-
Guam	2	1	-	25	34	-	-	-	-
P.R.	661	629	-	215	240	-	-	-	48
V.I.	4	1	-	2	1	-	-	-	-
Pac. Trust Terr.	126	200	-	122	52	-	16	-	-
Amer. Samoa	2	-	-	-	5	-	1	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending September 19, 1987 (37th Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	>65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	607	422	107	47	16	15	52
Boston, Mass.	183	110	42	19	7	5	24
Bridgeport, Conn.	45	34	7	4	-	-	2
Cambridge, Mass.	32	26	4	2	-	-	2
Fall River, Mass.	17	14	1	2	-	-	-
Hartford, Conn.	29	15	9	4	1	1	2
Lowell, Mass.	16	13	2	-	1	-	-
Lynn, Mass.	19	15	3	-	1	-	1
New Bedford, Mass.	28	23	4	-	1	-	3
New Haven, Conn.	47	25	9	10	-	3	2
Providence, R.I.	40	31	3	-	2	4	5
Somerville, Mass.	10	8	2	-	-	-	1
Springfield, Mass.	50	35	9	4	2	1	4
Waterbury, Conn.	37	29	5	2	-	1	4
Worcester, Mass.	54	44	9	-	1	-	2
MID. ATLANTIC	2,505	1,618	523	229	61	74	123
Albany, N.Y.	46	32	8	2	-	4	1
Allentown, Pa.	21	16	4	1	-	-	2
Buffalo, N.Y.	97	68	19	2	3	4	9
Camden, N.J.	42	27	11	3	-	1	2
Elizabeth, N.J.	17	14	3	-	-	-	-
Erie, Pa.†	33	23	8	-	1	1	1
Jersey City, N.J.	57	23	17	6	3	8	2
N.Y. City, N.Y.	1,364	843	283	159	32	37	60
Newark, N.J.	48	20	12	9	3	4	3
Paterson, N.J.	33	19	5	6	2	1	3
Philadelphia, Pa.	283	209	61	16	3	4	16
Pittsburgh, Pa.†	59	40	11	3	1	4	2
Reading, Pa.	35	31	4	-	-	-	1
Rochester, N.Y.	121	83	22	9	6	1	13
Schenectady, N.Y.	25	19	6	-	-	-	2
Scranton, Pa.†	28	16	9	2	-	1	-
Syracuse, N.Y.	98	61	21	7	6	3	3
Trenton, N.J.	55	39	12	2	1	1	2
Utica, N.Y.	18	13	3	2	-	-	-
Yonkers, N.Y.	25	21	4	-	-	-	1
E.N. CENTRAL	2,431	1,584	518	180	62	87	84
Akron, Ohio	112	83	18	9	1	1	-
Canton, Ohio	52	40	7	2	-	3	2
Chicago, Ill.§	564	382	125	45	10	22	16
Cincinnati, Ohio	92	69	16	3	1	3	7
Cleveland, Ohio	149	92	30	19	2	6	2
Columbus, Ohio	132	86	26	12	5	1	6
Dayton, Ohio	141	88	41	7	1	4	9
Detroit, Mich.	276	147	63	30	16	20	6
Evansville, Ind.	49	40	8	-	1	-	3
Fort Wayne, Ind.	62	37	16	5	3	1	2
Gary, Ind.	10	5	4	1	-	-	-
Grand Rapids, Mich.	53	34	9	7	-	3	5
Indianapolis, Ind.	211	125	62	11	5	8	4
Madison, Wis.	35	17	10	6	1	1	5
Milwaukee, Wis.	149	110	25	4	1	9	3
Peoria, Ill.	41	27	7	3	2	2	1
Rockford, Ill.	43	27	10	1	5	-	2
South Bend, Ind.	85	43	8	2	-	2	4
Toledo, Ohio	119	86	17	8	7	1	5
Youngstown, Ohio	86	64	16	5	1	-	2
W.N. CENTRAL	867	586	181	60	22	27	56
Des Moines, Iowa	76	57	12	4	1	2	1
Duluth, Minn.	27	19	5	1	1	1	3
Kansas City, Kans.	28	16	8	2	2	-	1
Kansas City, Mo.	103	69	20	8	2	4	10
Lincoln, Nebr.	44	28	10	1	2	3	1
Minneapolis, Minn.	233	156	48	14	6	8	12
Omaha, Nebr.	99	70	20	7	-	2	7
St. Louis, Mo.	147	92	33	12	3	6	18
St. Paul, Minn.	63	45	7	6	1	-	1
Wichita, Kans.	67	40	17	5	4	1	2
S. ATLANTIC	1,303	769	301	145	51	36	39
Atlanta, Ga.	182	79	50	37	7	9	3
Baltimore, Md.	226	131	50	30	9	6	5
Charlotte, N.C.	101	58	27	14	1	1	2
Jacksonville, Fla.	92	63	17	8	2	2	4
Miami, Fla.	174	97	43	18	11	4	2
Norfolk, Va.	52	34	10	4	2	2	1
Richmond, Va.	78	41	27	6	3	1	6
Savannah, Ga.	40	31	7	1	1	-	1
St. Petersburg, Fla.	84	70	8	4	-	2	2
Tampa, Fla.	69	47	14	6	1	1	6
Washington, D.C.	172	95	41	14	14	8	4
Wilmington, Del.	33	23	7	3	-	-	1
E.S. CENTRAL	714	437	171	55	27	24	36
Birmingham, Ala.	94	58	24	4	3	5	1
Chattanooga, Tenn.	55	32	13	8	2	-	2
Knoxville, Tenn.	58	38	13	3	1	3	6
Louisville, Ky.	73	49	15	5	2	2	5
Memphis, Tenn.	169	109	27	17	5	11	13
Mobile, Ala.	75	50	20	3	2	-	2
Montgomery, Ala.	45	29	10	4	2	-	1
Nashville, Tenn.	145	72	49	11	10	3	5
W.S. CENTRAL	1,290	781	272	131	53	52	44
Austin, Tex.	52	23	17	8	2	2	4
Baton Rouge, La.	38	28	5	4	1	-	1
Corpus Christi, Tex.	47	27	12	2	3	3	3
Dallas, Tex.	216	121	38	33	15	9	3
El Paso, Tex.	48	26	11	3	3	5	4
Fort Worth, Tex	92	64	18	4	5	1	1
Houston, Tex.§	308	176	74	34	13	11	2
Little Rock, Ark.	71	46	14	4	3	3	6
New Orleans, La.	125	74	28	13	4	6	2
San Antonio, Tex.	168	98	34	15	3	8	11
Shreveport, La.	61	48	7	3	1	2	2
Tulsa, Okla.	74	60	14	8	-	2	5
MOUNTAIN	583	370	121	44	29	19	31
Albuquerque, N. Mex.	71	47	14	4	5	1	3
Colo. Springs, Colo.	40	30	4	2	2	2	6
Denver, Colo.	110	66	26	8	7	3	6
Las Vegas, Nev.	75	45	19	7	3	1	6
Ogden, Utah	19	7	5	2	-	5	2
Phoenix, Ariz.	101	58	22	9	6	6	2
Pueblo, Colo.	30	21	5	3	1	-	1
Salt Lake City, Utah	40	27	7	4	2	-	1
Tucson, Ariz.	97	69	19	5	3	1	4
PACIFIC	1,993	1,315	354	200	64	53	119
Berkeley, Calif.	15	10	3	2	-	-	-
Fresno, Calif.	84	47	23	3	6	4	3
Glendale, Calif.	20	17	2	1	-	-	-
Honolulu, Hawaii	65	43	16	3	1	2	11
Long Beach, Calif.	106	78	15	7	3	3	6
Los Angeles Calif.	476	297	88	59	22	6	21
Oakland, Calif.	58	33	11	8	3	3	3
Pasadena, Calif.	43	31	7	3	2	-	1
Portland, Oreg.	151	112	22	9	5	3	7
Sacramento, Calif.	139	98	22	12	3	4	11
San Diego, Calif.	148	95	25	14	6	7	17
San Francisco, Calif.	197	117	35	37	1	7	4
San Jose, Calif.	161	107	32	15	6	1	12
Seattle, Wash.	195	131	30	20	5	9	10
Spokane, Wash.	70	51	13	4	1	1	6
Tacoma, Wash.	64	48	10	3	-	3	5
TOTAL	12,313††	7,892	2,548	1,091	385	387	584

*Mortality data in this table are voluntarily reported from 121 cities in the United states, most of which have populations of 100,000 o more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are no included.

**Pneumonia and influenza.

†Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current wee Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Data not available. Figures are estimates based on average of past 4 weeks.

1990 Objectives — Continued

1990 Objectives for the Nation in Occupational Safety and Health (*1*)

Objective 1: By 1990, workplace accident deaths for firms or employers with 11 or more employees should be reduced to less than 3,750 per year.

Objective 2: By 1990, the rate of work-related disabling injuries should be reduced to 8.3 cases per 100 full time workers.

Objective 3: By 1990, lost workdays due to injuries should be reduced to 55 per 100 workers annually.

Objective 4: By 1990, the incidence of compensable occupational dermatitis should be reduced to about 60,000 cases.

Objective 5: By 1990, among workers newly exposed after 1985, there should be virtually no new cases of four preventable occupational diseases—asbestosis, byssinosis, silicosis and coal worker's pneumoconiosis.*

Objective 6: By 1990, the prevalence of occupational noise-induced hearing loss should be reduced to 415,000 cases.*

Objective 7: By 1990, occupational heavy metal poisoning (lead, arsenic, zinc) should be virtually eliminated.*

Objective 8: By 1985, 50 percent of all firms with more than 500 employees should have an approved plan of hazard control for all new processes, new equipment and new installations.

Objective 9: By 1990, all firms with more than 500 employees should have an approved plan of hazard control for all new processes, new equipment and new installations.

Objective 10: By 1990, at least 25 percent of workers should be able, prior to employment, to state the nature of their occupational health and safety risks and their potential consequences, as well as be informed of changes in these risks while employed.*

Objective 11: By 1985, workers should be routinely informed of lifestyle behaviors and health factors that interact with factors in the work environment to increase risks of occupational illness and injuries.

Objective 12: By 1985, all workers should receive routine notification in a timely manner of all health examinations or personal exposure measurements taken on work environments directly related to them.

Objective 13: By 1990, all managers of industrial firms should be fully informed about the importance of and methods for controlling human exposure to the important toxic agents in their work environments.

Objective 14: By 1990, at least 70 percent of primary health care providers should routinely elicit occupational health exposures as part of patient history, and should know how to interpret the information to patients in an understandable manner.

Objective 15: By 1990, at least 70 percent of all graduate engineers should be skilled in the design of plants and processes that incorporate occupational safety and health control technologies.

Objective 16: By 1990, generic standards and other forms of technology transfer should be established, where possible, for standardized employer attention to such

*Denotes objectives for which no accurate measure of progress is now available.

1990 Objectives — Continued

major common problems as: chronic lung hazards, neurological hazards, carcinogenic hazards, mutagenic hazards, teratogenic hazards and medical monitoring requirements.

Objective 17: By 1990, the number of health hazard evaluations being performed annually should increase tenfold; the number of industrywide studies being performed annually should increase threefold.

Objective 18: By 1985, an ongoing occupational health hazard/illness/injury coding system, survey and surveillance capability should be developed, including identification of workplace hazards and related health effects, including cancer, coronary heart disease and reproductive effects. This system should include adequate measurements of the severity of work-related disabling injuries.

Objective 19: By 1985, at least one question about lifetime work history and known exposures to hazardous substances should be added to all appropriate existing health data reporting systems, e.g., cancer registries, hospital discharge abstracts and death certificates.

Objective 20: By 1985, a program should be developed to: 1) follow up individual findings from health hazard and health evaluations, reports from unions and management and other existing surveillance sources of clinical and epidemiological data; and 2) use the findings to determine the etiology, natural history and mechanisms of suspected occupational disease and injury.

References:

1. Public Health Service. Promoting health/preventing disease: objectives for the nation. Washington, DC: US Department of Health and Human Services, Public Health Service, 1980.
2. CDC. Leading work-related diseases and injuries — United States. MMWR 1983;32:24-6,32.
3. Association of Schools of Public Health. Proposed national strategies for the prevention of leading work-related diseases and injuries, part 1. Washington, DC: The Association of Schools of Public Health under a cooperative agreement with the National Institute for Occupational Safety and Health, 1986.

Current Trends

Withdrawal of Approval for Subcutaneous Administration of Norden Rabies Vaccines for Dogs and Cats

Effective August 17, 1987, the U.S. Department of Agriculture (USDA) is withdrawing approval for subcutaneous administration of Endurall-K* and Rabguard-TC*, manufactured by Norden Laboratories, Inc., Lincoln, Nebraska. Endurall-K (a vaccine that imparts a 1-year duration of immunity) and Rabguard-TC (a 3-year vaccine) should now be administered only intramuscularly to dogs and cats.

In July 1985, the USDA gave provisional approval for subcutaneous administration of these vaccines to dogs and cats, pending completion of a duration-of-immunity study and rabies challenge tests. In the study, rabies-neutralizing antibody responses

*Use of trade names is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services or the Public Health Service.

Rabies — Continued

following subcutaneous vaccination were comparable to those observed following intramuscular vaccination throughout the 3 years after vaccination. However, when dogs and cats were injected with live rabies virus in separate challenge studies, they were not adequately protected 3 years after subcutaneous vaccination. Therefore, all dogs and cats that received these vaccines subcutaneously should be revaccinated intramuscularly with a Norden vaccine or with another approved vaccine (*1*). Since July 1985, several million doses of these vaccines have been sold annually in the United States and Canada (Norden Laboratories, Inc., unpublished data). The number of animals vaccinated subcutaneously is not known.

Veterinarians who have administered the Norden vaccines subcutaneously should inform pet owners of the need for revaccination. Health agencies and other organizations that have sponsored rabies vaccination clinics should inform their communities. Questions regarding procedures for revaccination should be addressed to Norden Laboratories, Inc., collect, at (402) 475-6843 between 8:00 a.m. and 4:00 p.m. CDST. This withdrawal of approval for subcutaneous administration of Norden vaccines does not apply to other rabies vaccines licensed for subcutaneous use.

Reported by: Veterinary Svcs, USDA. Viral and Rickettsial Zoonoses Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Editorial Note: The rabies challenge study was conducted with laboratory dogs and cats 3 years after they had received only a single dose of vaccine subcutaneously. It is likely that most pets have received more than one rabies vaccination because the recommended schedule for primary rabies immunization in dogs and cats is an initial dose at 3 months of age, followed by an additional dose 1 year later (*1*). Therefore, most animals receiving a Norden vaccine subcutaneously for primary immunization should have already received a second vaccination. In addition, because the vaccines were not approved for subcutaneous use until July 1985, most dogs and cats receiving them subcutaneously as booster immunizations should have received at least one previous immunization with an approved vaccine by an approved route.

The level of protection conferred by administering the Norden vaccines subcutaneously in a primary immunization series (2 doses) or a booster immunization is not known. Therefore, animals that have received the Norden vaccines subcutaneously but have not been subsequently revaccinated intramuscularly with a Norden vaccine or another approved vaccine should be regarded as unvaccinated for the purposes of rabies postexposure management.

References

1. CDC. Compendium of animal rabies control, 1987—prepared by: the National Association of State Public Health Veterinians, Inc., [sic]. MMWR 1987;35:807-10, 815-8.

FIGURE I. Reported measles — United States, weeks 33-36, 1987

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